## CLAIMS

1. An internal control device for a mechanical gearbox equipped with first and second input clutches (40, 41) that respectively control the transmission of the engine torque to concentric first and second primary shafts (20, 30) carrying fixed pinions (21, 22, 23, 31, 32), with two secondary shafts (50, 60) carrying idler pinions driven respectively by the first and second primary shafts, and with claw-coupling means (100, 101, 102, 103) of the idler pinions actuated by an assembly of forks (230, 240, 250, 260), characterized in that selection of and shifting between all gear ratios of the box are assured by a common selector (210) composed of a selection drum (211) and of a shift carriage (220) concentric with the drum and disposed in the interior thereof.

2. A control device according to claim 1, characterized in that the drum (211) is fixed axially but is mobile in rotation.

3. A control device according to claim 1 or 2, characterized in that this drum (211) drives the carriage (220) in rotation.

4. A control device according to claim 1, 2 or 3, characterized in that the carriage has fingers (221, 222) that displace the rods (231, 241, 251, 261) of the forks (230, 240, 250, 260) to engage the gear ratios.

5. A control device according to one of the preceding claims, characterized in that the drum has at least three peripheral sectors (212, 213, 214) of larger diameter cooperating with the drive claws (252, 262, 272, 282) of the fork rods (231, 241, 251, 261).

6. A control device according to claim 5, characterized in that the peripheral sectors (212, 213, 214) of the drum (211) have three zones of different angular inclinations (212a, 213a, 214a; 212b, 213b, 214b; 212c, 212b, 212c) relative to the axis of rotation of the drum (211), cooperating with the claws (252, 262, 272, 282) respectively to initiate an axial displacement

thereof from a position with gear ratios engaged to a neutral position, to achieve this displacement and to lock the fork rods (231, 241, 251, 261) in neutral position.

7. An internal control device according to claim 5, characterized in that the peripheral sectors (212, 213, 214) of the drum (211) have at their ends a first angular zone with non-parallel flanks of progressive slope, which cooperate with the fork claws (252, 262, 272, 282) to initiate an axial displacement thereof from a position with gear ratios engaged to a neutral position known as the dead point, and an angular zone (212c, 213c and 214c) with parallel flanks, which cooperate with the claws to lock the fork rods that engage the gear ratios in position.

8. A control device according to claim 6 or 7, characterized in that the locking zones (212c, 213c, 214c) of the peripheral sectors (212, 213, 214) are oriented transversely relative to the axis of rotation of the drum (211).

9. A control device according to claim 8, characterized in that it is provided with a central peripheral sector (213) that cooperates with two claws.

10. A control device according to claim 9, characterized in that the central peripheral sector (213) has zones with inclined flanks at its two ends, whereas the other sectors have zones with inclined flanks only at their end facing the central sector.

11. A control device according to any one of the preceding claims, characterized in that the engagement and disengagement of all gear ratios is effected by simple rotation of the rotation of the drum (211).

12. A control device according to any one of the preceding claims, characterized in that the drum (211) permits the simultaneous engagement of two gear ratios of different parity.

13. A control device according to any one of the preceding claims, characterized in that the drum (211) disengages the gear ratio of the same

parity as that in the course of selection.